Hernia (2009) 13:667–668
DOI 10.1007/s10029-009-0564-4

LETTER TO THE EDITOR

Single port totally extraperitoneal laparoscopic inguinal hernia repair

Re: Single incision total extraperitoneal (one SITE) laparoscopic inguinal hernia repair using a single access port device, B. P. Jacob et al. (2009) Hernia, June 27 (Epub ahead of print)

P. Bucher · F. Pugin · P. Morel

Received: 30 July 2009 / Accepted: 18 September 2009 / Published online: 4 October 2009
© Springer-Verlag 2009

Dear Editor,

We read with interest the letter by Jacob et al. [1] reporting a series of three cases of single incision totally extraperitoneal (TEP) laparoscopic inguinal hernia repair. This letter deserves comments regarding the potential of development for single incision or port laparoscopic inguinal hernia repair.

We first want to congratulate Jacob et al. [1] for their report of single incision TEP laparoscopic inguinal hernia repair, although previous authors have reported single incision TEP inguinal repair [2]. As these authors, we have also tried to approach inguinal hernia through single port access TEP laparoscopic repair and have completed four cases [3]. However, our experience with single port access laparoscopic TEP inguinal hernia repair made us draw different conclusions compared to Jacob et al.

We have completed four cases of inguinal hernia (two unilateral indirect, one bilateral indirect, and one unilateral direct hernias) repair through single port access (SPA) laparoscopic TEP using Parietex ADP2™ meshes (Covidien) without parietal fixation. A single 12-mm port was inserted inside the inferior umbilical skin on the midline. To conduct SPA TEP inguinal hernia repair, a working channel endoscope (Richard Wolf GmbH) was used with a standard straight 5-mm instrument. Dissection was achieved without a dissecting balloon. After hernia reduction and spermatic cord and vessel isolation, the mesh was placed. The anterior facial incision was closed with 2/0 Maxon under vision. The median operative time was 60 (range 52–64) min. One intra-operative complication was recorded (bleeding from the corona mortis vein), which was controlled by electro-coagulation, but necessitated the adjunction of an additional 5-mm midline port. No post-operative complications were recorded and no recurrences have been recorded to the present with a median follow-up of 14 (range 16–13 months).

First, we found that, using a single-incision multiport trocar, such as those available for clinical practice, mandates a too large an incision compared to those needed for conventional TEP laparoscopic repair. Conventional TEP laparoscopic repair could be achieved easily with two laparoscopic ports (one umbilical and one midline) by surgeons experienced in TEP laparoscopic repair. Using this approach, the median operative time is, in our experience, 34 (range 13–54) min [4]. Large umbilical incisions may, as noted by Jacob et al., be associated with a higher rate of incisional hernia and may not offer a major cosmetic advantage. However, they may be associated with a decrease in the analgesia needed compared to the two-port approach. For this reason, we tried to perform single port TEP laparoscopic repair using a single 12-mm access to further decrease parietal trauma. While single port access TEP repair is feasible, as we experienced, it is probably too difficult and does not offer sufficient safety, even for surgeons experienced with single access surgery and TEP repair. We, thus, think that other inguinal hernia repair approaches and instrumental development should be investigated in order to improve the feasibility, safety, and cosmetic results of single access inguinal cure before diffusing this technique for this indication. According to this question, we have now undergone investigation of trans-abdominal pre-peritoneal (TAPP) inguinal repair, using a multiport trocar (TriPort™, ASC) with a deflectable-tip endoscope and flexible or curved instrumentation. Preliminary experience

P. Bucher (✉) · F. Pugin · P. Morel
Visceral Surgery, Department of Surgery,
University Hospital Geneva, 4, Rue Gabrielle-Perret-Gentile,
1211 Geneva 14, Switzerland
e-mail: pascal.bucher@hcuge.ch

with laparoendoscopic single-site TAPP, in our hands, was associated with subjective surgeon improved feasibility and safety, while allowing improved cosmetic results.

In conclusion, we think that improvement in cosmesis, which can be associated with a decrease in parietal trauma, for inguinal repair have investigated in more detail. The development of a two-port technique may be a first step, but single access surgery is the approach that we should examine more closely. Instrumental development and the evaluation of different approaches, especially the TAPP approach, may be the way forwards. However, we should keep in mind that our first mission is patients' cure and surgical safety while developing these new techniques.

References

1. Jacob BP, Tong W, Reiner M, Vine A, Katz LB (2009) Single incision total extraperitoneal (one SITE) laparoscopic inguinal hernia repair using a single access port device. Hernia [Epub ahead of print]
2. Cugura JF, Kirac I, Kulis T, Janković J, Beslin MB (2008) First case of single incision laparoscopic surgery for totally extraperitoneal inguinal hernia repair. Acta Clin Croat 47:249–252
3. Bucher P, Pugin F, Morel P (2009) Scarless surgery: reality through umbilical laparoendoscopic single site surgery (LESS)? Rev Med Suisse 5:1412–1415
4. Bucher P, Pugin F, Inan I, Ris F, Morel P (2008) Single midline working port for TEP inguinal and crural hernia repair. Swiss Knife Suppl 1:50